

The NOAA Gulf of Mexico Data Atlas: Digital Discovery and Access to Gulf Data

Bays and Bayous Symposium 2012



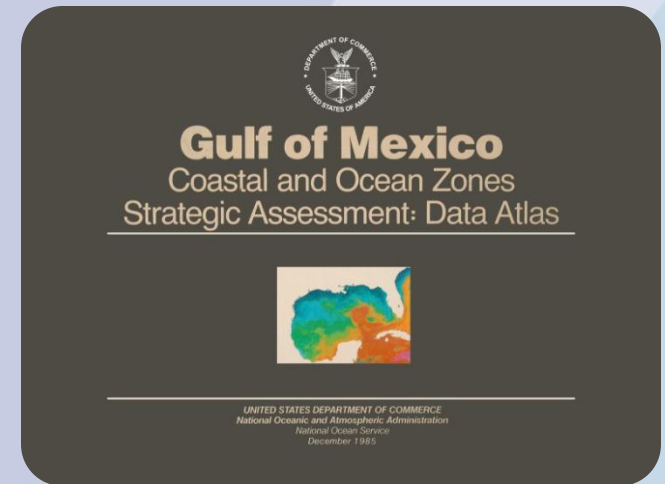
Kate Rose
National Coastal Data Development Center

The NOAA Gulf of Mexico Data Atlas

Provides **access** to datasets that characterize baseline conditions of Gulf of Mexico ecosystems to assist long-term **research**, **monitoring**, and **restoration** programs

Based on the 1985 Data Atlas:

Gulf of Mexico Coastal and Ocean Zones Strategic Assessment Data Atlas, NOAA National Ocean Service



Digital data discovery and access tool that allows a wide range of users to browse through a **growing** collection of datasets visualized as map plates

Supports Goals & Objectives of NOAA and Regional Partnerships

NOAA's Next Generation Strategic Plan

NOAA Habitat Blueprint, Ecosystem Based Management/Coastal Marine Spatial Planning, Integrated Ecosystem Assessments

Gulf of Mexico Alliance Priority Issue Teams

Water Quality; Habitat Restoration; Nutrients; Ecosystem Integrated Assessments; Coastal & Community Resiliency; Education & Outreach

Gulf Coast Ecosystem Restoration Task Force Principals and Objectives

healthy and resilient coastal wetlands and barrier shorelines; healthy, diverse, sustainable fisheries; adaptive and resilient coastal communities; sustainable storm buffers; healthy and well managed inland habitats and watersheds, offshore waters

Climate Adaptation

Baseline Assessments, Trend Analyses, Time-Series et al

Requests for Baseline

Assessments/Current Characteristics

e.g., Katrina, Rita, Ike; DWH Event (2005-2011)

Includes 30
federal, state,
non-governmental
and academic
partnerships

NOAA National Oceanic and Atmospheric Administration

National Sea Grant Office
Mississippi-Alabama Sea Grant Consortium
National Estuarine Research Reserve System
Grand Bay National Estuarine Research Reserve
National Marine Fisheries
Southeast Fisheries Science Center
Galveston Laboratory
Pascagoula Laboratory
Miami Laboratory
Southeast Regional Office
Protected Resources Division
Habitat Conservation Division
Office of Sustainable Fisheries
National Environmental Satellite, Data & Information Service
National Oceanographic Data Center
National Coastal Data Development Center
National Geophysical Data Center
National Climatic Data Center
Office of Oceanic and Atmospheric Research
Atlantic Oceanographic and Meteorological Laboratory
Coastal Services Center
Gulf Coast Services Center
Northern Gulf Institute - A NOAA Cooperative Institute (?)
National Ocean Service
National Centers for Coastal and Ocean Sciences
Center for Coastal Monitoring and Assessment
Center for Coastal Environmental Health and Biomolecular Research
Office of Response and Restoration
Spatial Data Branch
Office of National Marine Sanctuaries
Flower Gardens Bank National Marine Sanctuary
Office of Coast Survey
Hydrographic Survey Division
NOS Special Projects

Non-Governmental Organizations

Ocean Conservancy
Gulf of Mexico Coastal and Ocean Observing Systems
NatureServe
The Nature Conservancy
Gulf of Mexico Foundation

International Partners

National Commission for the Knowledge and Use of Biodiversity
Comision Nacional para el Conocimiento y Uso de la Biodiversidad (CONABIO)

EPA Environmental Protection Agency

Mobile Bay National Estuary Program
EPA - Gulf Ecology Division

Department of Defense

United States Army Corp of Engineers

Mobile District

Spatial Data Branch

Joint Airborne Lidar Bathymetry Technical Center of Expertise

Engineer Research and Development Center

Coastal and Hydraulics Laboratory

Department of Interior

United States Geological Service

Gulf Coast Science Coordination Office

National Wetlands Research Center

National Water Quality Assessment Program

Bureau of Ocean Energy Management

Gulf of Mexico Region

Gulf State Agencies

Florida Department of Environmental Protection

Florida Fish and Wildlife Conservation Commission

Florida Fish and Wildlife Research Institute

Mississippi Department of Marine Resources

Alabama Department of Conservation & Natural Resources

Louisiana Department of Wildlife & Fisheries

Gulf States Marine Fisheries Commission

Academic Institutions

Mississippi State University

Dauphin Island Sea Lab

Harte Research Institute, Texas A&M University,
Corpus Christi

Texas A&M, College Station

Florida Institute of Oceanography, University of
South Florida

University of Southern Mississippi

Institute of Arctic and Alpine Research, University
of Colorado, Boulder

gulfatlas.noaa.gov

2 ways to browse and search for data

The screenshot shows the NOAA Gulf of Mexico Data Atlas website. At the top is a navigation bar with links: NOAA HOME, WEATHER, OCEANS, FISHERIES, CHARTING, SATELLITES, CLIMATE, RESEARCH, COASTS, CAREERS. Below this is the NOAA logo and the title "NOAA GULF OF MEXICO DATA ATLAS" with the subtitle "NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION". A search bar on the left contains "Search Gulf Atl" and a "GO" button. A breadcrumb trail says "you are here: home". A left sidebar lists: Home, About, Partners, User's Guide, Technology, and Map Catalog. The main area features a map of the Gulf of Mexico with a "Map Catalog" label and a play button icon. A "Please Note" section mentions browser compatibility. A "Map RSS Feed" icon is at the bottom left. On the right, a "Welcome to the Gulf of Mexico Data Atlas" panel includes a "Description" of the study area, "Instructions" on how to use the map, and an "Acknowledgements" section for the 1985 Gulf of Mexico Data Atlas. A footer contains U.S. Department of Commerce and NOAA links, and a FOIA/Customer Service link.

NOAA HOME WEATHER OCEANS FISHERIES CHARTING SATELLITES CLIMATE RESEARCH COASTS CAREERS

NOAA GULF OF MEXICO DATA ATLAS
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Search Gulf Atl GO » you are here: home

Home
About
Partners
User's Guide
Technology
Map Catalog

Please Note: The following browsers have been tested with the data atlas: Internet Explorer 7+ or higher, Mozilla Firefox 3+ or higher, Chrome 10+ or higher, or Safari 4+ or higher.

Additionally, you must enable JavaScript and disable pop-up blocking for the data atlas to function properly.

Map RSS Feed

U.S. Department of Commerce | NOAA | NESDIS | NODC | NCDDC
Disclaimer | Privacy Policy | Copyright Notice | USA.gov

Information Quality | Freedom of Information Act (FOIA)
Customer Service | NCDDC.data_atlas@noaa.gov

Welcome to the Gulf of Mexico Data Atlas

Description
The study area encompasses Gulf of Mexico coastal counties of the USA, as defined by the Federal Coastal Zone Management Act, and Mexican municipal districts bordering on Gulf of Mexico waters. The seaward boundaries of the study area extend to the Yucatan Channel and the Straits of Florida.

Instructions
Data have been broken down into 6 categories: *physical, biotic, living marine resources, economic activity, environmental quality, and jurisdictions*. By hovering over one of these categories along the top of the map, you can access the datasets listed within a pop-up menu. Clicking on any one of these datasets will cause the map to refresh with the selected data displayed and details about the data itself displayed in this window.

If you wish to reset the map to its original settings, click on the reset button under the **Basemap** category.

If you need additional instructions, click on the in the upper left corner of the map.

Acknowledgements
1985 Gulf of Mexico Data Atlas

Map Catalog

Atlas map plate interface

Atlas Map Plate Interface

5 Themes

Basemap

Physical

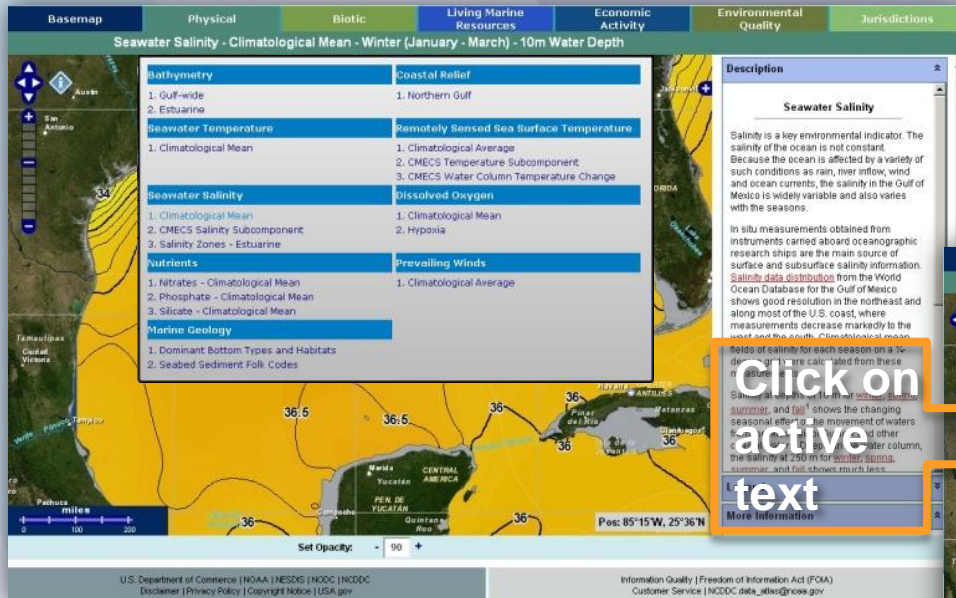
Biotic

Living Marine Resources

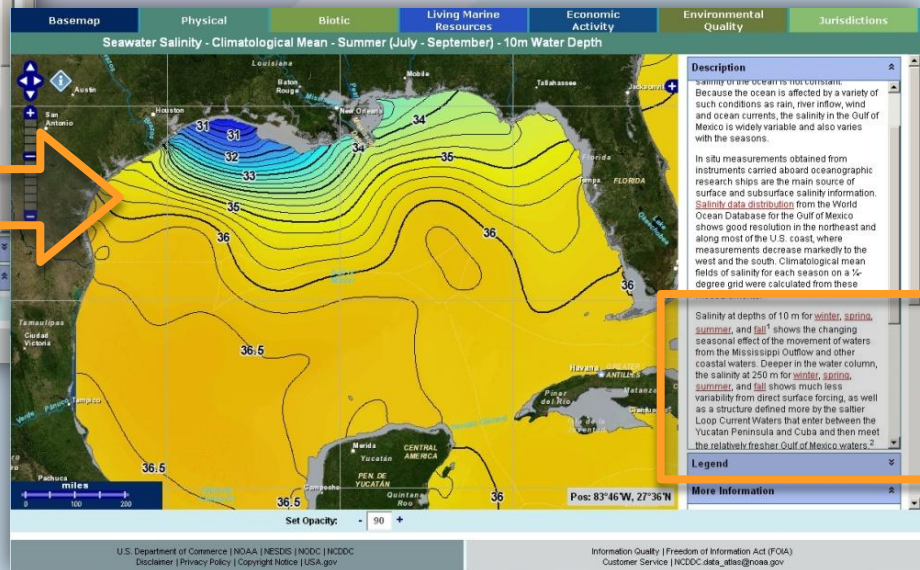
Economic Activity

Environmental Quality

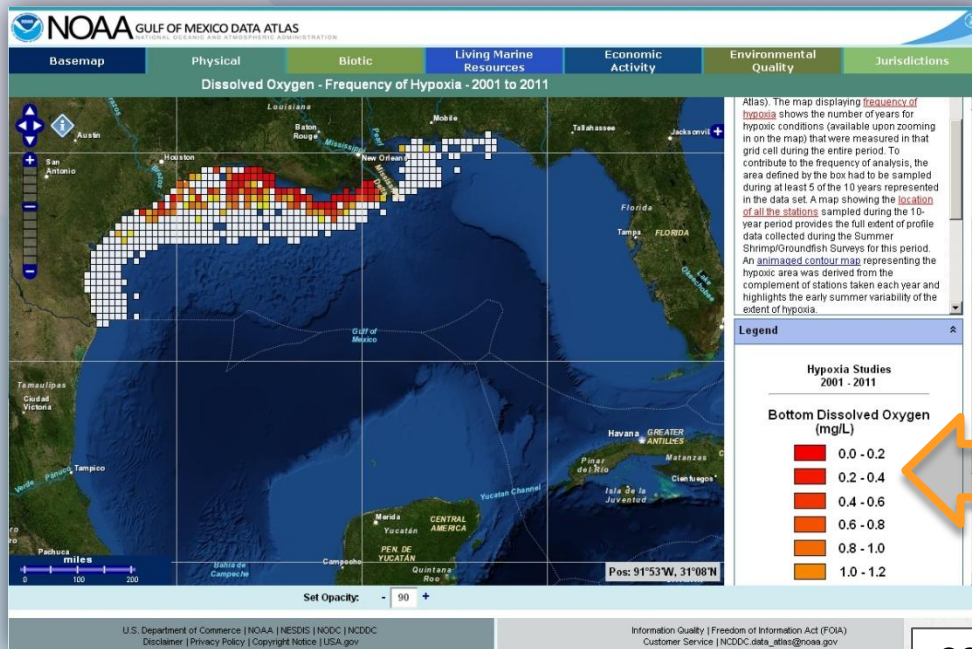
Jurisdictions



WINTER
NODC seasonal seawater salinity climatology at 10 m water depth

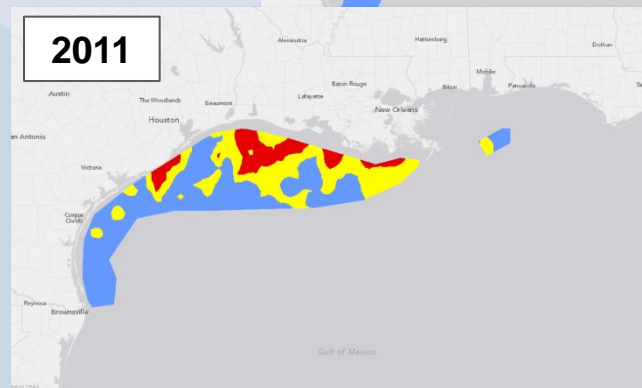
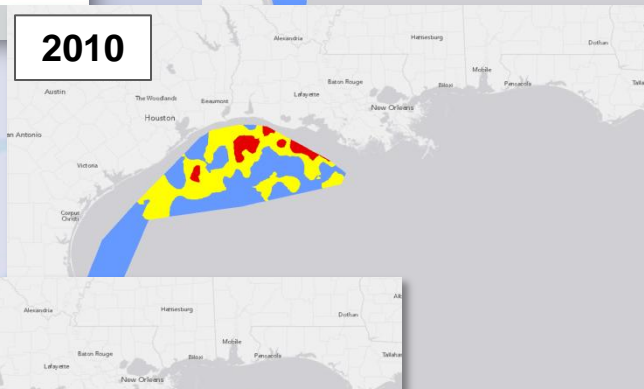
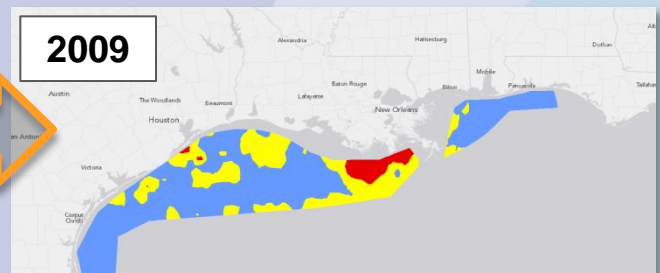


SUMMER
NODC seasonal seawater salinity climatology at 10 m depth, **summer**

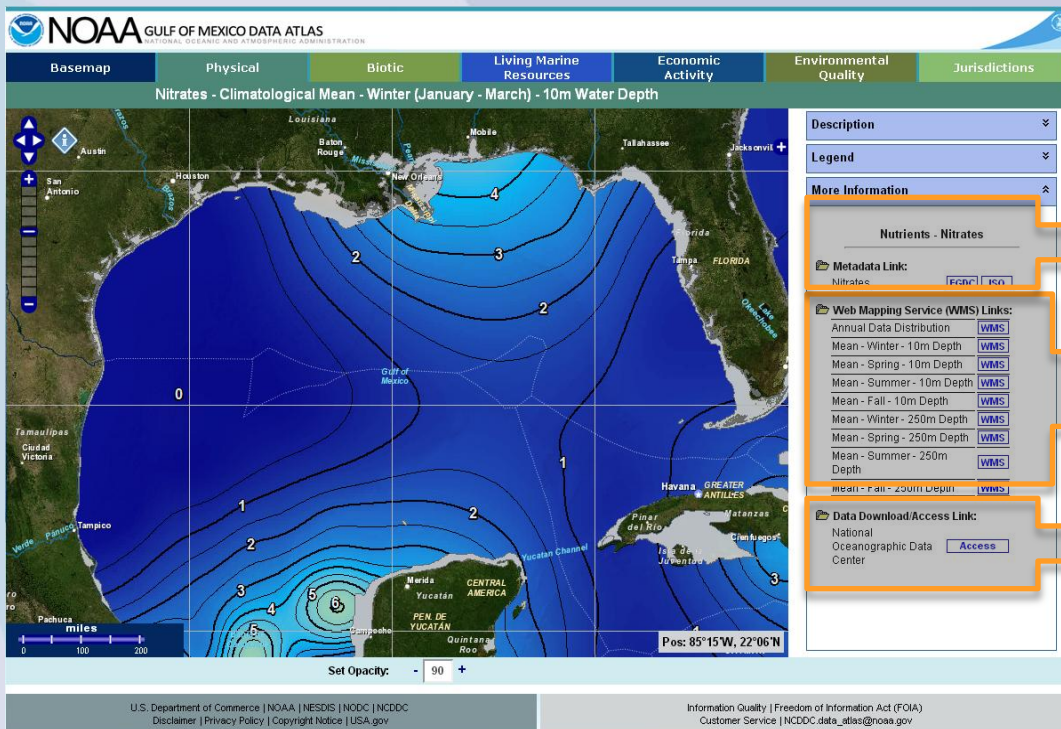


Click on active text to launch animations, charts and graphs

2001 to 2011 SEAMAP hypoxia frequency of occurrence (10 minute lat-long grid)



2001 to 2011 SEAMAP dissolved oxygen concentration contours



World Ocean Atlas 0.25 degree grid salinity climatologies for the Gulf of Mexico

Identification Information
Content Information
Distribution Information
Metadata Maintenance Information

Metadata:
File identifier:
Language:
Character set:
Hierarchy level:
Sege code:
Metadata author:
Responsible par:
Organisation:
Contact info:
Phone:
Teleph:
Voice:
Facsim:
Address:

Metadata

Web Mapping Services

GEOSPATIAL PLATFORM

PROTOTYPE
Welcome to
NOAA GeoPlatform

esri
IS Online

Web Mapping Service (WMS) Links:
Annual Data Distribution WMS
Mean - Winter - 10m Depth WMS
Mean - Spring - 10m Depth WMS
Mean - Summer - 10m Depth WMS
Mean - Fall - 10m Depth WMS
Mean - Winter - 250m Depth WMS
Mean - Spring - 250m Depth WMS
Mean - Summer - 250m Depth WMS
Mean - Fall - 250m Depth WMS
Data Download/Access Link:
National Oceanographic Data Center Access

NOAA NATIONAL OCEANOGRAPHIC DATA CENTER (NODC)

NOAA Satellite and Information Service

You are here: NODC Home > Ocean Climate Laboratory > OCL Products > Gulf of Mexico Regional Climatology

Gulf of Mexico Regional Climatol

A set of mean fields for temperature, salinity, oxy
silicate, and nitrate for the Gulf of Mexico are avai
download. [More details](#) ...
For any questions about this product, please e-m


- Temperature (°C): [Data](#), [Figures](#)
- Salinity (unitless): [Data](#), [Figures](#)
- Oxygen (ml/l): [Data](#), [Figures](#)
- AOU (ml/l): [Data](#), [Figures](#)
- o2sat (%): [Data](#), [Figures](#)
- Phosphate (µM): [Data](#), [Figures](#)
- Silicate (µM): [Data](#), [Figures](#)

Note: Climatologies updated 10/05/2011.
Previous climatologies contained incorrect depth values for
temperature and

Data Download

[illegible]

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[OCEANS](#)
[FISHERIES](#)
[CHARTING](#)
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NOAA

GULF OF MEXICO DATA ATLAS

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

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you are here: [home](#) → [catalog of maps](#)

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Physical

[Bathymetry](#)

- Gulf-wide
- Estuarine

[Coastal Relief](#)

- Northern Gulf

[Dissolved Oxygen](#)

- Climatological Mean
- Hypoxia

[Marine Geology](#)

- Dominant Bottom Types and Habitats
- Seabed Sediment Folk Codes

[Nutrients](#)

- Nitrates - Climatological Mean
- Phosphate - Climatological Mean
- Silicate - Climatological Mean

Living Marine Resources


[Fishes](#)

- Atlantic Croaker
- Gag Grouper
- Gray Triggerfish
- Gulf Butterfish
- King Mackerel
- Lane Snapper
- Red Grouper
- Red Snapper
- Sand Seatrout
- Silver Seatrout
- Spanish Mackerel
- Spot
- Vermilion Snapper
- Yellowedge Grouper

Map catalog

Table of Contents

gulftiles.noaa.gov/catalog/living-marine/fishes/

 **NOAA** GULF OF MEXICO DATA ATLAS
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Fishes

Atlantic Croaker

11,637 40 foot trawls taken during SEAMAP Summer and Fall Shrimp/Bottomfish Surveys from 1987 to 2009 and 4,304 16 foot and 20 foot trawls from the Comparative Assessment of Gulf Estuarine ecoSystems (CAGES) database from 2000 to 2007. This is fisheries independent data from both federal and state agencies.

Additional image formats and visualization tools:

- [Atlantic Croaker Abundance Map Access](#)
- [Atlantic Croaker Trawl Effort Map Access](#)
- [Trawl Stations Map Access](#)

- [Stations Map Access](#)
- [By Water Bodies Map Access](#)
- [Map Access](#)

Gag Grouper

Gag grouper are taken during Southeast Area Monitoring and Assessment Program (SEAMAP) and National Marine Fisheries Service (NMFS) fishery-independent reef fish and bottom longline resource surveys throughout the U.S. Gulf of Mexico.

Additional image formats and visualization tools:

- [Gag Grouper Occurrence Map Access](#)
- [Gag Grouper Reef Fish Abundance Map Access](#)
- [Reef Fish Effort Map Access](#)
- [Reef Fish Stations Map Access](#)
- [Gag Grouper Bottom Longline Abundance Map Access](#)
- [Bottom Longline Effort Map Access](#)
- [Bottom Longline Stations Map Access](#)

Living Marine Resources

- Atlantic Croaker
- Gag Grouper
- Gray Triggerfish
- Gulf Butterfish
- King Mackerel
- Lane Snapper
- Red Grouper
- Red Snapper
- Sand Seatrout
- Silver Seatrout
- Spanish Mackerel
- Spot
- Vermilion Snapper
- Yellowedge Grouper

Habitats

- Essential Fish Habitats
 - Council managed Species
 - Highly Migratory Species - Atlantic Bluefin Tuna
- Critical Habitats

Invertebrates

- Eastern Oyster
- Brown Shrimp
- Pink Shrimp
- White Shrimp

Sharks

- Atlantic Sharpnose Shark
- Blacknose Shark
- Blacktip Shark

Economic Activity

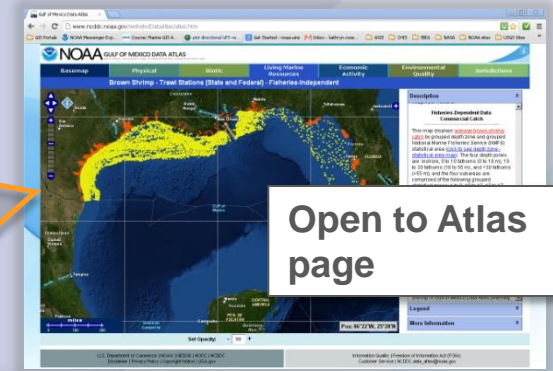
Offshore Activities

- Shipping and Navigation
- Oil and Gas Structures
- Oil and Gas Pipelines
- Borrow Sites

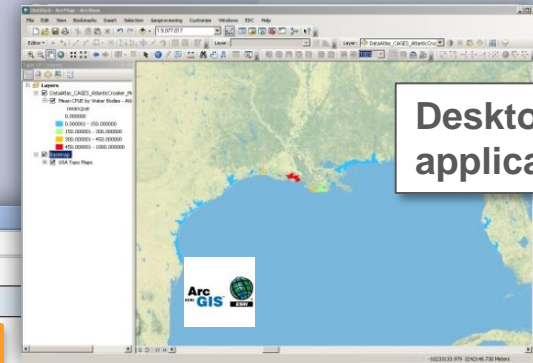
Map Catalog Page - Fishes

Select from list of map plates

Open to Atlas page



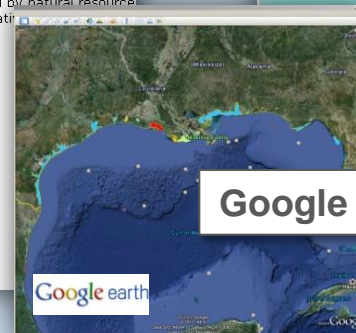
Desktop applications



Cloud-based applications



Google Earth



DataAtlas/CAGES_AtlanticCroaker_MeanCPUE_ByWaterBody (MapServer)

View In: [ArcMap](#) [ArcGIS Explorer](#) [ArcGIS JavaScript](#) [ArcGIS.com Map](#) [Google Earth](#)

View Footprint In: [Google Earth](#)

Service Description:

Map Name: Atlantic Croaker

[Legend](#)

[All Layers and Tables](#)

Layers:

- [Mean CPUE by Water Bodies - Atlantic Croaker \(0\)](#)

Description: Atlantic croaker (*Micropogonias undulatus*) mean catch per unit effort (CPUE) averaged over a time period (2000- within a bay/estuarine were averaged. This data are the compilation of fishery-independent data collected by natural resource Mississippi, Alabama, and Florida). It is based on trawling samples and made available through the Comparati

Copyright Text: NOAA Fisheries Service

Spatial Reference: 102100 (3857)

Single Fused Map Cache: false

Initial Extent:

XMin: -1.1067482824539334E7
YMin: 2736828.995613107
XMax: -8973696.240994051
YMax: 3889164.7772045983
Spatial Reference: 102100 (3857)

Full Extent:

REST service record

Enterprise Technology Drivers

- “...complement current Administration initiatives for openness and transparency of government information and data...”
- “...promote interoperable, effective and efficient problem solving tools spanning across organizations, thereby reducing the cost associated with developing independent geospatial capabilities while providing effective and timely information to decision makers.”
- “...increase information sharing across various levels of government and the private sector, allowing for the reuse and adaptation of geospatial assets.”

195 Map Plates in 65 Subject Areas

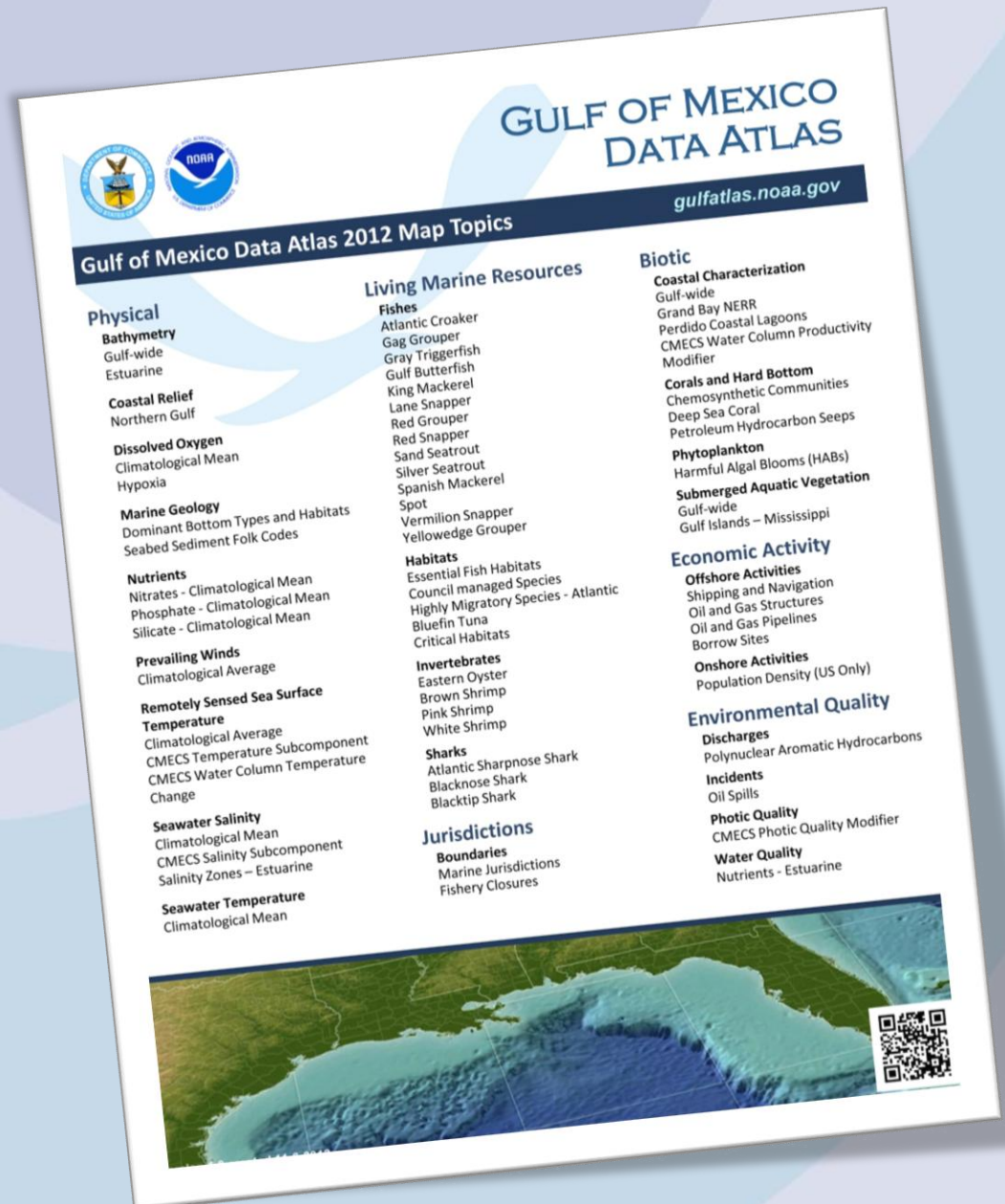
November 2011:

95 map plates in 30 subject areas

November 2012:

added 100 map plates and 35 subject areas

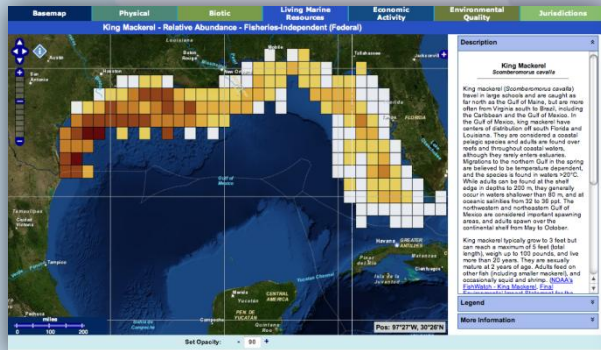
Continue to add new datasets and develop new partnerships



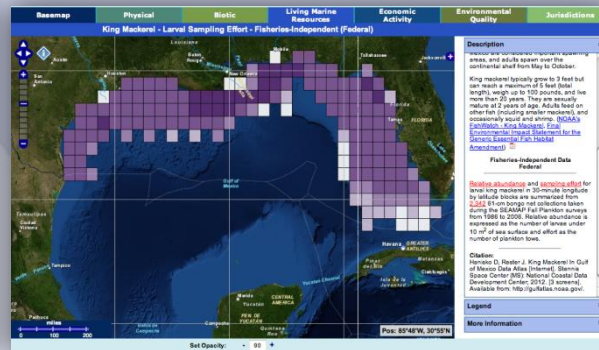
New datasets added in 2012

Living Marine Resources

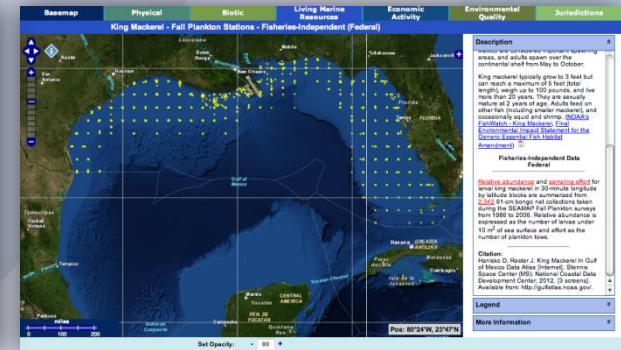
Fisheries-independent relative abundance and sampling effort- Federal (SEAMAP)



larval King Mackerel relative abundance
(summarized) 1986-2006



larval King Mackerel sampling effort
(summarized) 1986-2006



Bongo net collection sites
1986-2006

Fishes

Atlantic Croaker, Sand Seatrout, Silver Seatrout, Spot, Gray Triggerfish, Yellowedge Grouper, Lane Snapper, Vermillion Snapper, King Mackerel, Spanish Mackerel, Gulf Butterfish

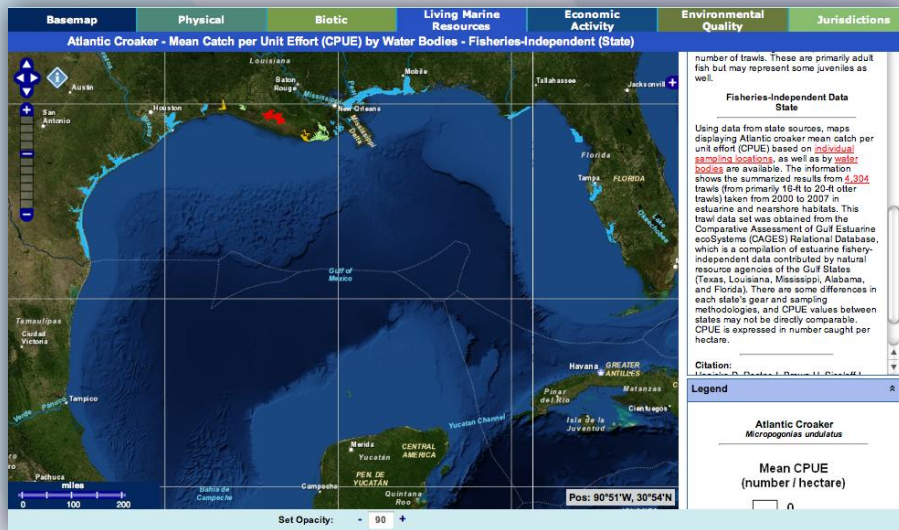
Sharks

Atlantic Sharpnose Shark, Blacknose Shark, Blacktip Shark

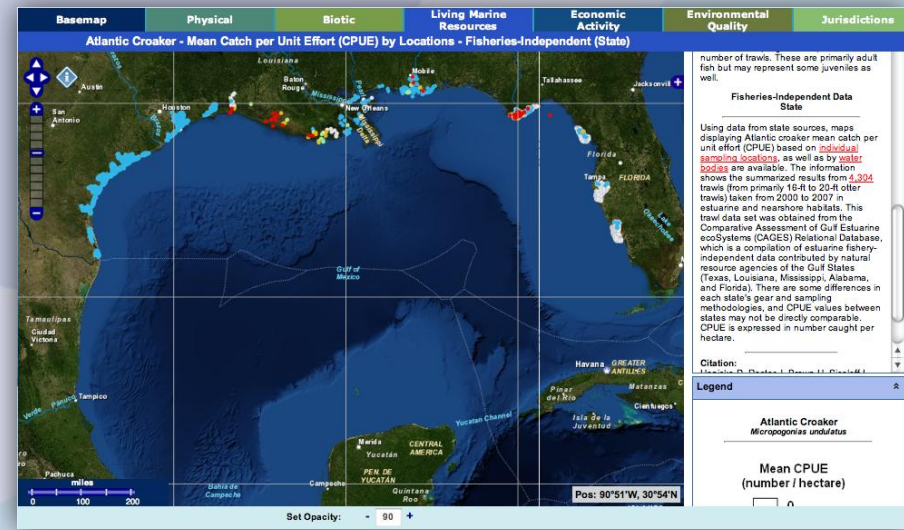
New Datasets added in 2012

Living Marine Resources

Fisheries-Independent Data- State, Comparative Assessment of Gulf Estuarine ecoSystems (CAGES) Relational Database, 2000-2007



Atlantic Croaker mean CPUE by waterbody



Atlantic Croaker mean CPUE by sampling location

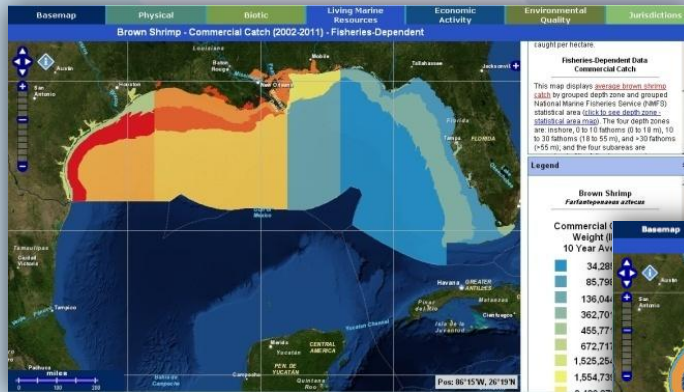
Invertebrates

Brown Shrimp

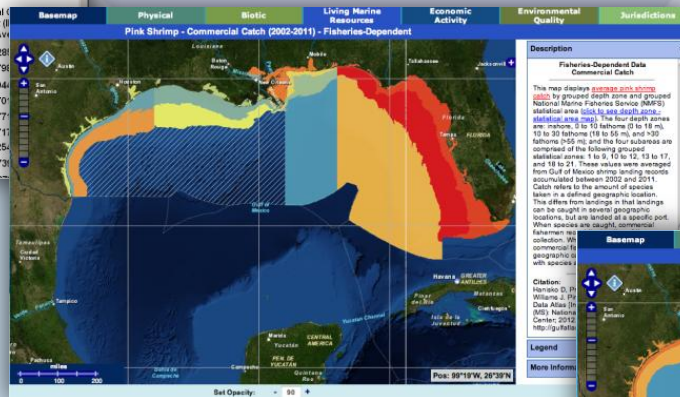
New datasets added in 2012

Living Marine Resources

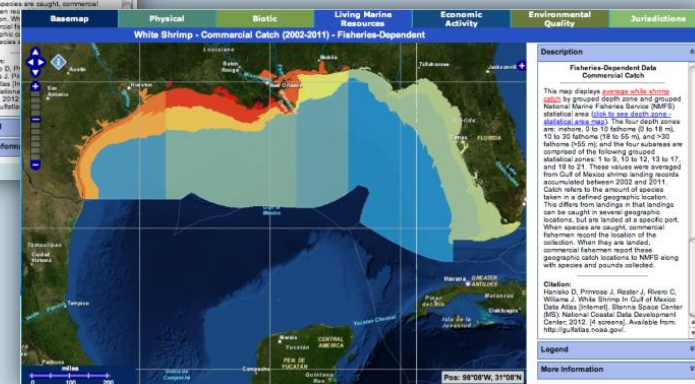
Fisheries-Dependent Data- average commercial catch grouped by depth zone and NMFS statistical area, 2002-2011



Average brown shrimp commercial catch



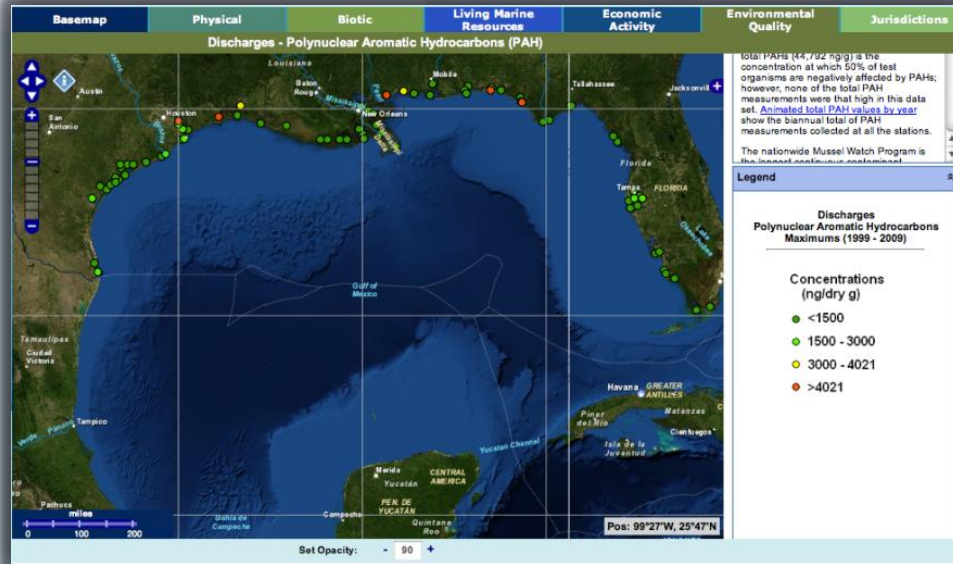
Average pink shrimp commercial catch



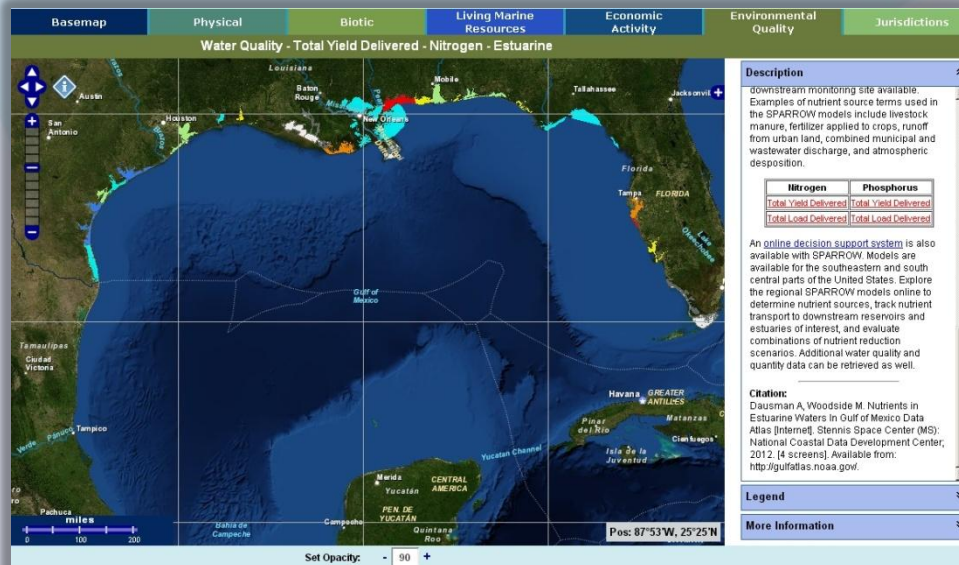
Average white shrimp commercial catch

New datasets added in 2012

Environmental Quality



Polynuclear aromatic hydrocarbon total concentrations at Mussel Watch sampling sites, 1999-2009



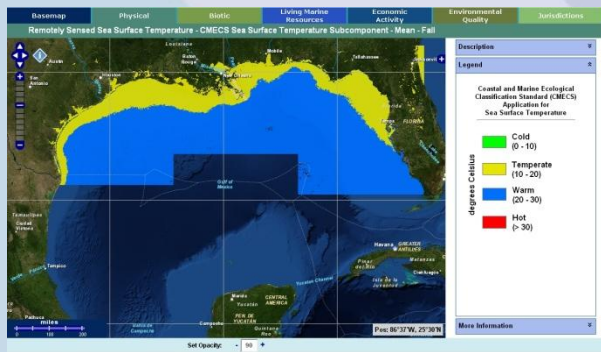
Estimated total delivered yields and total delivered loads of nitrogen and phosphorus as estimated by the USGS SPARROW model, 2002

New datasets added in 2012

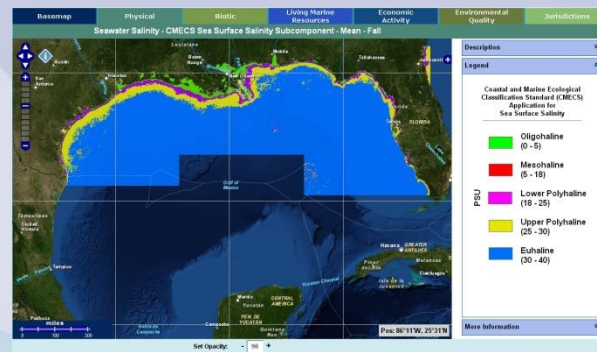
Coastal and Marine Ecosystem Classification Standard (CMECS) application

Seasonal means of daily, level-1B MODIS-Aqua satellite imagery (2005-2009)
processed through the Naval Research Lab Automated Processing System

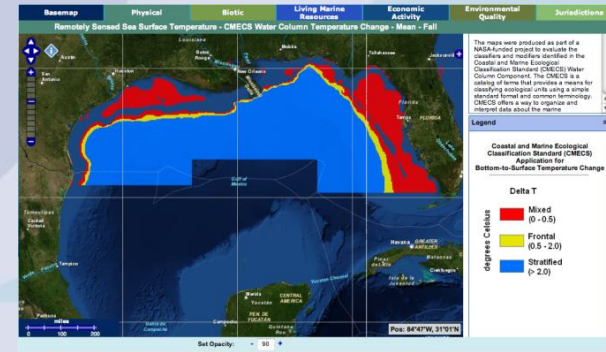
Physical



Sea surface temperature, fall

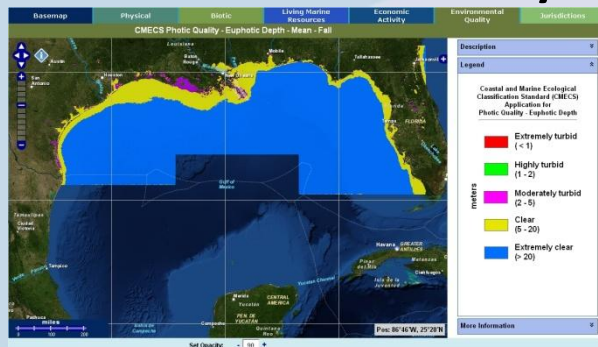


Sea surface salinity, fall



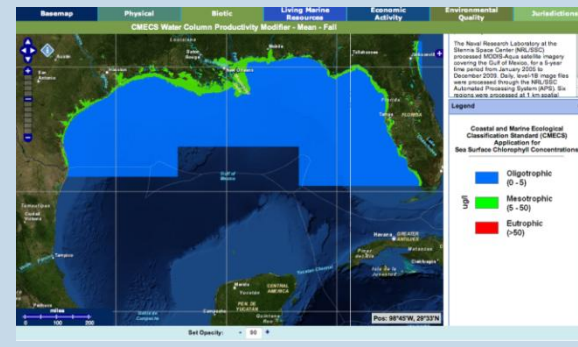
Bottom-to-surface temperature change, fall

Environmental Quality



Photic quality – euphotic depth

Biotic



Sea surface chlorophyll concentrations, fall